

STEEL-FRAMED VS. AIR-SUPPORTED STRUCTURES

Choose a Steel-framed, Engineered Fabric Building

At Long Island Building Systems, we erect buildings that work as hard as you do. Designed specifically for your climate, your location, and your building needs, a steel-framed fabric structure is your ideal building solution. Consider the following criteria when comparing our buildings to alternatives such as air-supported structures (ie. bubbles or air halls):

Structural Abilities	
Steel Fabric Structures	Air-Supported Structures
<ul style="list-style-type: none"> Fabric panels tensioned over engineered, steel trusses. 	<ul style="list-style-type: none"> The fabric is the structural component. If there is a problem with the fabric, the structure is lost.
<ul style="list-style-type: none"> The light transmitted through our single cover, eliminates the need for daytime lighting even on cloudy days. 	<ul style="list-style-type: none"> Coated PVC fabrics reduce translucency by 4-6% making it necessary for artificial lighting all the time.
<ul style="list-style-type: none"> The polyethylene fabric will not attract or hold dirt contaminants and proves to be self-cleaning. 	<ul style="list-style-type: none"> Without expensive top finishes, fabric will become dirty further lowering translucency and degrading aesthetics.
<ul style="list-style-type: none"> Our buildings are engineered to meet or exceed all local applicable building codes. 	<ul style="list-style-type: none"> Permits based on mechanical equipment specs that can maintain structure during high wind or inclement weather. Failure of mechanical equipment could mean complete collapse of building.
<ul style="list-style-type: none"> Our membrane fabric has extremely high tear-rip-stop capabilities 	

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Operating Costs	
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<ul style="list-style-type: none"> Our membrane fabric virtually eliminates the need for daytime lights, drastically reducing operating costs compared to that of similar building types. 	<ul style="list-style-type: none"> Lower translucency due to coated fabric demands daytime lights must be left on.
<ul style="list-style-type: none"> Power actuated vents and fans are on demand use only, further reducing energy demands. 	<ul style="list-style-type: none"> Electric motors using 10-20 hp amps run 24 hours a day to maintain internal pressure and inflation.
<ul style="list-style-type: none"> Operation and maintenance costs are inexpensive overall. 	<ul style="list-style-type: none"> Higher mechanical maintenance and associated insurance needs increase operating costs.

Year Round Usage	
Steel Fabric Structures	Air-Supported Structures
<ul style="list-style-type: none"> A shade-cloth effect requires minimum ventilation to keep the building cool in the summer. 	<ul style="list-style-type: none"> Air-tight bubbles require year-round air conditioning (often taken down in the spring).
<ul style="list-style-type: none"> Optional insulation and heating systems ensure pleasant conditions in the winter. 	<ul style="list-style-type: none"> Costs associated with take down, storage, and set up negatively affecting aesthetics and playing conditions year after year.

On-site Construction	
Steel Fabric Structures	Air-Supported Structures
<ul style="list-style-type: none"> Foundation can be as little as footings at truss and end column base plate locations. Foundation requirements are typically a fraction of that of similar conventional buildings. 	<ul style="list-style-type: none"> A continuous concrete beam is required to deal with "uplift" and the "air tight" seal. Mechanical equipment requires a concrete pad and underground vault sections to supply inflation air.

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Lighting / Ceiling Support

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<ul style="list-style-type: none"> ▪ Superior truss strength supports several types of lighting and heating systems as well as signage or a host of other ideas. 	<ul style="list-style-type: none"> ▪ Due to bouts of depressurization, nothing should be hung from ceiling in order to safeguard users.

Entrances

Steel Fabric Structure	Air-Supported Structures
<ul style="list-style-type: none"> ▪ Industry standard doors with tempered glass, closures, and hardware are utilized on our buildings. ▪ Larger overhead doors can be installed conventionally throughout the structure, without the necessity of air locks. 	<ul style="list-style-type: none"> ▪ Requires "air locks" for large vehicle entrances. ▪ For the primary entrance, a double door airlock or revolving door is necessary, making it difficult to accommodate high traffic flow.